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ABSTRACT

This paper offers a conceptual model or theory that synthesizes previous research, personal experience, and years of dialogue with instructors of wilderness programs, and other wilderness users. The goals of this model are to create a useful tool to help practitioners improve their programs and train instructors, focus additional research, help users understand how to use the wilderness for their own benefit, and increase understanding by resource managers about how the natural environment they manage can contribute to the development of human resources. This document outlines the four basic tenets of the model and discusses four tentative principles which describe a process of learning through wilderness experiences. (CW)

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HOW WILDERNESS EXPERIENCE PROGRAMS FACILITATE PERSONAL GROWTH: THE HENDEE/BROWN MODEL

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PRESENTED AT THE 4TH WORLD WILDERNESS CONGRESS
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BACKGROUND

Scores of studies have been conducted on wilderness experience programs to determine their affect on participants.[1] [2] Hundreds of investigative and popular articles have been written about wilderness adventure programming and outdoor leadership and courses offered at many universities (Hendee & Roggenbuck, 1982). Scientifically, one can conclude from the research evidence that many wilderness programs yield small but significant increases in self esteem, improved self concept, a shift in locus of control from external to internal, and heightened self-awareness--among some but not all participants.

Despite several analyses of the experiential process, there are not yet agreed upon principles to guide the training of instructors and practitioners in the use of wilderness for personal growth, therapy and education.[3] Neither is there any agreed upon theory, model or framework to guide further research or program design.[4] Supporting evidence for wilderness-personal growth programs comes from the strong belief in their value by practitioners, and the testimony of participants who have found insight, self-discovery, increased self-esteem and personal redirection through their participation.[5]

Such proponents strongly believe in the value of wilderness and outdoor environments as a location where development of human resources is possible and likely. We should not discount a belief fundamental in the development of so many programs. The general notion is that in the wilderness you can learn about yourself, your companions and nature. In wilderness, away from the social intensity and distractions of daily life, participants can test themselves and thereby heighten self confidence and esteem, clarify their identity and personal values, and address the central issues in their lives. Furthermore, while in such environments and while benefiting from such awareness, plans to change troublesome behavior can be laid and patterns redirected toward more inspired purposes. Besides all that, wilderness experience programs are exciting and fun.

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HOW DOES THE WILDERNESS WORK?

But how do programmed wilderness experiences facilitate the personal growth of participants? When and under what conditions is growth most likely to occur? How much personal growth is possible? What is the right mix of hard skills such as rock climbing with soft skills such as group dynamics exercises and solo time? Can certain kinds of experiences and conditions be prescribed to produce desired results? Can we, as practitioners and proponents of the use of wilderness for personal growth, therapy and education, synthesize our collective experience, and evidence from studies, into a practical conceptual framework?

We think tentative answers to these questions are available. This paper offers a conceptual model or theory that synthesizes previous research, personal experience and years of dialogue with instructors of wilderness programs, their participants and other wilderness users.

Our goals in developing this theoretical model are:

* to create a useful tool incorporating previous research and experience to help practitioners improve their programs and train instructors;
* to focus additional research;
* to help users understand how to use the wilderness for their own greater inspiration and benefit;
* and to increase understanding by resource managers about how the natural environments they manage can contribute to the development of human resources.

Let us outline the basic tenets of the model and show how it can be used by program leaders, participants, scientists and resources managers. The model consists of four postulates, which are assumptions or statements we assume to be true, and four hypotheses, which are tentative principles, inferred from observed evidence and put forth for the sake of argument. These tenets of the model are important individually, as key points for consideration; and collectively in describing a sequential process by which personal growth is facilitated through programmed wilderness experiences.

THE HENDEE/BROWN MODEL

A THEORY ABOUT HOW WILDERNESS EXPERIENCES FACILITATE PERSONAL GROWTH

PERSONAL GROWTH

First, some definitions and assumptions. By personal growth we mean a range of effects toward expanded fulfillment of one's capabilities and potential. We see a continuum of personal growth outcomes ranging from insight at the low end of the spectrum, clarified purpose

in the middle, to the transformation or redirection of one's life on the high end.

We define growth motivation as including all motive patterns which aim toward personal development and self-actualization.[6] For example, personal growth begins with an increase awareness of one's desires, abilities and values, which makes possible the satisfaction of needs and the achievement of goals that are important and unique for each individual. For some it may be more power and possessions; for others it may be enhanced love and relatedness to humanity.

But many people may also be struggling with deficiency needs such as dependency, low self-esteem, poor sense of identify, a lack of direction or self-confidence. Thus, the growth continuum might begin with a heightened awareness of deficiency needs, and one's values and behavior at the low end of the spectrum; clarified purpose, commitment and direction in the middle; and potential transformation or life redirection at the high end.

FOUR POSTULATES

Postulate 1: PERSONAL GROWTH DEPENDS ON RECEPTIVITY

> Personal growth from a wilderness experience depends on the participants' receptivity. Do they want to go? What do they expect from the experience? Are they willing to change?

Readiness for change may depend on conditions preceding the experience which affect one's motivation to grow or change, and also one's stage in life. For example, people struggling with deficiency needs or who are already striving toward self-improvement are likely to be receptive to personal growth. So are people in transition from one life stage to another--such as from adolescence to adulthood, mature adult to middle age, from illness to health, from marriage to divorce. Likewise, people coping with change or emotional trauma--such as a new job or the loss of a loved one--are good candidates for personal growth and can benefit from clarified values and heightened self-esteem which may stimulate renewed direction and meaning for their lives. People struggling with deficiency needs, in transition from one life stage to another, coping with trauma--such persons are better candidates for personal growth from a wilderness program because they may be receptive to any insight or inspiration that appears.[7]

We believe that one cause of clouded results in the hundreds of studies of participants in wilderness programs is that they include persons who are not in a receptive mode. Such studies include participants along the whole continuum of growth motivation, including persons who are comfortable, in a steady state period of adjustment, not motivated to explore themselves in any depth. Others may be in a stage of denial which often precedes growth and which would cause them to resist a process of change. Unreceptive participants are not likely to experience growth.

Postulate 2: PERSONAL GROWTH DEPENDS ON OPTIMUM STRESS FROM THE EXPERIENCE

> Personal growth depends on the right degree of stress from the wilderness experience--physically and emotionally--and this threshold will vary with the physical condition and previous experience of each individual.

Natural environment experiences are diverse in their intensity, from gentle hikes near town to wilderness experiences requiring rigorous and skillful physical activity like backpacking or technical rock climbing. Stress comes from dealing with the rigors, discomfort, danger, and uncertainty of outdoor experiences--all dependent on weather conditions. A sudden snowstorm can turn a day-hike into a survival situation. The stress is physical and psychological--as anyone knows who has gritted his or her teeth with determination to fight pain and fatigue those last few miles back to camp at the end of a hard day. And with extreme physical stress may come psychological breakdown, as anyone knows who has unraveled wilderness disasters where the difference between death and survival was panic or logical decisions.

There is a wide belief that the greater the natural environment intensity, and the harder it is to access and enjoy the environment, the greater is the potential for personal growth (no pain, no gain . . .!). The more natural, primitive and remote the setting and camping style, the greater the likelihood for personal growth to occur--so goes this line of thinking.

But this is not necessarily true. There are limits and each person has his or her own unique threshold of tolerance for intensity of contact with the natural environment which must not be crossed if the experience is to have a maximum positive and productive effect. Beyond a certain point, the individual may become overwhelmed by the challenge, demands, uncertainty or dangers, and then the experience can "short circuit" with net negative results.

Examples abound: the 1986 disaster on Mt. Hood where seven teenage students and two teachers on an adventure education program lost their lives in an unexpected storm, and periodic incidents from military basic training. Every adventure education program has dealt with overwhelmed participants whose stress threshold has been exceeded.

The goal is to expose wilderness program participants to optimum stress from intensity of the experience--and this threshold will vary with each individual's previous outdoor experience, skill, physical capabilities, responsibility and maturity. The purpose is to create just enough stress with which the individual can successfully cope and enough to also bring core behavior and psychological patterns into awareness where they can be identified, clarified, evaluated and redirected if desired.[8]

Excessive stress may trigger a whiplash effect. For example, excessive stress may provoke uncontrolled emotional release beyond a constructive threshold and result in denial, repression of exposed weaknesses and mobilization of defenses--a regressive rather than progressive growth effect.[9] Furthermore, excessive stress once survived can lead some to inflated ego and self-aggrandizement--a survivalist effect that can produce a macho or authoritarian attitude and self concept that will thwart cooperation.

Thus, excessive stress from too intense a natural environment experience can lead to either collapse of ego or over-inflation of ego--both thwarting optimum personal growth. The goal is that right threshold of environmental intensity to allow successful coping, yet also producing enough stress to effectively reveal core patterns where they can be considered, evaluated and appropriately affirmed or shaped in positive ways.

Prescribing the right degree of environmental intensity is thus extremely important and will vary depending on individual differences. Some things to consider are: willingness to risk; personal growth motivation and needs; physical health; previous outdoor experience and skill; responsibility and maturity; the psychological readiness, receptivity, or goal orientation of the participants; and the individual or group outcomes desired.[10]

For example, a young and physically vigorous group, seeking strengthened cooperation in the work place through team building and peer bounding, might require a greater degree of environmental intensity than would an older more sedentary group of senior executives seeking to enhance their capacity for creative problem solving. The younger group might require several days of wilderness backpacking and programmed activities to achieve optimum stress, while the older group might require less environmental intensity--perhaps easy hikes near a lodge or retreat facility to which they could easily return for board and room.

Postulate 3: WILDERNESS EXPERIENCES PROVIDE CHANGE AND ATTUNEMENT

> Wilderness experiences provide a reprieve from cultural influences, external constraints and stimuli, providing a change of pace and the opportunity for attunement to oneself and the immediate environment.

For many people whose lives are intense, the immediate effect may be a slowing down. For others, the effect may be liberation from the external forces that govern their daily lives.[11] With this liberation from our daily patterns, latent feelings, emotions and physiological functions may emerge. New perspectives may evolve. For example, a liberation from a predominantly left-brain analytical orientation in one's daily life may clear the way for the creative, visualizing and intuitive function of the right brain to emerge in wilderness. Enhanced potential for insight and a sense of renewal may follow as core patterns of behavior and values are viewed from a new perspective.

In western culture, we predominantly use the functions of the left side of the brain. In our work and play, we value, train, and utilize goal-oriented functions--reason, analysis, logic, problem solving to achieve our goals--and tap specific kinds of energy--strength, courage, detemination, and persisence. We are almost always in a rush, doing something purposeful, willful, important, and as a result too often we truly cannot see the forest for the trees![12]

In wilderness, attuning to ourselves and the natural world, we can experience the functions of the right side of the brain. We can relax, slow down and access higher levels of awareness--imagination, intuition, creativity, empathy, and insight--and enjoy the energies these functions deliver--awe, wonder, hope, inspiration, vision--that connect us to a sense of the values, meaning, and purpose of our lives. In the wilderness we can experience, once again, the true significance of our own lives in the natural order. This experience of seeing ourselves in a true perspective, both humbles and empowers us.[13]

Postulate 4: WILDERNESS EXPERIENCES PROVIDE METAPHORS

> Wilderness experiences can provide metaphors which heighten our awareness of desirable qualities we can develop for application back home in our daily lives.

The most standard metaphors come from dealing successfully with the stress of environmental intensity, the associated discovery of previously-untapped resources, and a sense of accomplishment.[14] This is why optimum stress is important--to provide challenge but also to allow for successful coping.

The opportunities for metaphors are infinite, using programmed activities which reveal, and facilitate the development of, native abilities for leadership, creativity, enhanced reasoning and problem solving, communication, cooperation and teamwork, trust, delegation, negotiation and so forth. Metaphors provide new ways of seeing reality and the opportunity to reframe old ways of doing things.

For example, the cooperation and teamwork required in an exercise to get a squad over a twelve foot wall; the trust required to be lowered on a rope in a rock climbing and rappelling exercise; group dynamics exercises which require communication, cooperation and negotiation; or visualization exercises, enriched and stimulated by the natural environment, which can provide a blueprint for growth in new self-concepts. "I am like an oak tree with deep roots and strong branches"; "I am like the river, with greater depth when moving steady and gentle than when rushing wide but shallow." These metaphors can shape and guide behavior, inspire effort and build self-esteem.

FOUR HYPOTHESES

HOW THE WILDERNESS WORKS

How do wilderness experiences facilitate personal growth? The foregoing postulates provide some underlying assumptions. They are assumed to be true but, of course, each one provides a focus for additional research. The postulates are important because if we can isolate and understand the processes and conditions which enhance opportunities for personal growth from wilderness experiences, then we can more effectively prescribe experiences, conditions and programmed activities to maximize growth potential. These postulates lead us to four additional ideas or hypotheses about how wilderness experience can lead to personal growth--for receptive participants, experiencing the right degree of natural environment intensity, resulting in a change and attunement to oneself and the immediate environment, and creating opportunities for metaphoric experiences.

The following four hypotheses are both sequential and interrelated. They assert that wilderness experiences, under the assumptions of the postulates, can produce:

1) an increase in personal awareness, which can lead to
2) the threshold of growth motivation, or what might be called one's growing edge, which in turn can result in
3) an increase in social awareness.
4) All of these, enhanced by the primal influence of wilderness, can result in an experience of ourselves in true humility to the natural world.

Hypothesis 1: INCREASED PERSONAL AWARENESS

> Wilderness experiences can reveal core patterns of behavior, values, emotions, fears, drives and tendencies, thus fostering increased personal awareness, a first step toward growth.

When we begin a wilderness experience, we bring with us our worries, anxieties and concerns, and have usually also had to forcefully carve out time for the trip from the overwhelming fullness of our lives. Our minds and bodies want to slow down and relax even as our spirits want to soar.

It takes a while to shuck worries, tensions, concerns and fatigue, and even longer to throw off the patterns that drive us in our daily lives. One of the principle values of outdoor experience is the opportunity it provides us to notice just how patterned we really are.

If we are executives or managers, we may be used to making all the decisions. We automatically want to take charge, and may have a hard time letting go or cooperating with other people in the group. If we are employees, we may be used to taking orders or simply

following directions. We wait to be told what to do. If we are homemakers, we may be use to taking care of others and volunteer to prepare the food or clean up after meals. These roles and/or patterns may jump forth without our conscious bidding. And these static, repetitive roles and patterns are what erode our enthusiasm for living and wear us down. In the wilderness, we may begin to let them go--perhaps of necessity--for the duration of the trip at least.

Besides the roles we play in life, we each wear masks of one sort of another--images we invest in, portray to other people, hope they will respond to. But a happy-go-lucky smile may hide sadness and depression deep inside. The know-it-all may be deeply insecure. The sexy vixen may truly doubt her own self-worth. Someone who is dependent and helpless may be full of anger. A quiet person may be full of unexpressed creativity.

The wilderness environment provides a mirror with which to see reflections of our inner worlds. We are uncomfortable when our normal patterns do not work, or when they stand out in stark contrast in a new and unstructured setting--and this discomfort heightens our awareness. The novelty of the wilderness experience strips us of the normal social basis for personal identity, and provides many opportunities for acute personal awareness.

In the absence of our masks, roles and other social mechanisms for dealing with one another, we must confront ourselves. Our core patterns emerge under the stress of coping and change. Basic emotions, fears, drives, tendencies and personal values are seen with sharpened clarity, especially when programmed activities facilitating self-discovery are employed. Defense mechanisms emerge and can be gradually released as trust builds with companions. We can develop insight and glean new perspectives about who we really are inside.

Why in the wilderness? Because it is so far removed from the influences of our daily life. Our patterns, values, and beliefs emerge in bold relief. They become clear to us and to our companions. We cannot blame troubling patterns in the out-of-doors on our partners, boss, kids, parents, society. We alone are the authors of our wilderness experiences and, metaphorically, we may come to learn that we are also the primary authors of our lives back home. Such heightened personal awareness is often an uncomfortable revelation, but can be quite liberating, too. Increased personal awareness is the first step on a path toward change.

Hypothesis 2: FINDING ONE'S GROWING EDGE

> Wilderness and outdoor experiences, by heightening personal awareness of core patterns, beliefs and values, place participants at a growing edge where their personal qualities can be evaluated and change initiated, if desired.

The wilderness experience provides space for something new to happen. If unconscious patterns and values become clear, it can lead to important questions: is there a better way; what is the meaning of my life; what goals should I pursue; what's worth living for; what's worth dying for?! Simply stated, the growing edge hypothesis asserts that as personal awareness is heightened under the stress of coping with the outdoors, core patterns will become clear and be available for evaluation and potential change.

But it is also possible to simply go into the wilderness and replicate our standard patterns and routines. The hard-driving business executive may go with his son and hike 15 miles a day, carrying 65 pounds of gear. The immature young adult may go with his friends for a weekend beer party, and leave his beer cans strewn along the trail. People seek escape from the unhappiness of their lives and use the outdoors as space simply to get away, with no intention whatsoever of confronting their inner selves. In fact, many outdoor enthusiasts adamantly resist combining outdoor recreation with programmed activities in search of personal growth. It would spoil the fun! Such participants may not be receptive to the personal growth opportunities of programmed wilderness experiences.

We assert that outdoor environments, even on these terms, provide unique space for nurturing the growth of the human spirit. The 15-mile-a-day executive may have no other forum with which to reach his son. The young adult is asserting his independence, testing new wings and beginning to claim a life for himself. If he finds part of himself in the wilderness, he may return to search for more. Conservation and environmental ethics will hopefully be learned along the way. We all enjoy the peace, calm, and quieting effect of wilderness, and values have a way of getting clear, almost by themselves, in the presence of solitude and silence.

Participants in a receptive mode, experiencing a proper degree of environment intensity, liberated from their normal routines, enjoying a much needed change of pace and the opportunity for attunement, may find their growing edge even without the help of programmed activities directed toward self-discovery.

Hypothesis 3: INCREASED SOCIAL AWARENESS

> Wilderness group experiences can reveal the individual's ineffective patterns of social interaction, which then can be evaluated, shaped and improved, if so desired.

Every wilderness group is composed of unique individuals who are required to interact with one another during the trip. If strangers, they will be without the customary social identity of their daily lives. Each person unconsciously operates from his or her patterns, defenses, masks and roles. But then each may begin to slow down, to relax, to tune in to the environment and to him or herself. In the out-of-doors, people socialize in remarkably different ways. Status differences dissolve; stories are told; secrets are revealed; pains

are shared; new alliances and friendships are formed; existing friendships or family bonds can be strengthened.

On a wilderness program, when people have no opportunity to leave, no place to hide, and nowhere else to go, there lies a captive audience to be guided through the difficult work of personal growth. Candid interactions and sharing occur, encouraged by the trust developed through the cooperative efforts required by a wilderness experience. Group dynamics exercises and processes of self-discovery can greatly enhance the quality and depth of social interaction, and can heighten both social awareness and communication skills.

The wilderness is a socially ambiguous and undifferentiated space where we are all more or less equals. We must interact at basic human levels. While coping with an appropriate degree of environmental intensity and physical rigor, and unshielded by status and other conventional social bases for identity, we have many opportunities to see ourselves as others do; see into others like never before; recognize and appreciate our common human condition. In wilderness, enhanced trust among interdependent companions can reduce the risk of self-disclosure, and patterns of social interaction that are functional, effective and inspired can be developed and shared. With participants moving toward heightened self-awareness and their growing edge, new and more effective patterns of social interaction can be cultivated, tested and learned.

Hypothesis 4: THE PRIMAL INFLUENCE OF NATURE

> Wilderness experiences directly expose participants to the primal influences of the elements and nature, which fosters a sense of humility in relation to the natural world. The exposure to primal influences distinguishes the wilderness as an extraordinary place for personal growth compared to other locations such as a playground, counselling center, classroom or retreat facility.

In wilderness we must pay close attention to what is going on around us, and continually adapt and respond to changing circumstances. Our awareness must return to the basics, to the essentials, to the primal truths of existence. We confront the natural world and sense its indifference to us, regardless of our social status back home. We feel relatively insignificant in the face of nature's awesome power--the perfect antidote for a self-absorbed ego. We must be responsible for ourselves and for each other, in ways that are immediate and direct, for ultimately our lives can be at stake. The wilderness is unforgiving and is indifferent to our plight. We must pay a price for our mistakes. We see ourselves more clearly under such conditions, and we may be both humbled and inspired by the beauty and power of the natural world.

Still, we must survive! Entirely different combinations of senses, long repressed or perhaps never fully activated, awaken to

help us deal with the demands and intensity of the environment. In the wilderness, feedback is immediate. If we fail to notice the rain advancing up the valley, we may soon be soaking wet. If we don't pay attention to how our bodies feel, where we place our feet, how we stand or move, we may become exhausted, blistered, in the river, on the ground or hurt, and maybe badly injured.

We also hear the wind, waves, birds, animals, and the eerie sounds that nameless creatures utter in the darkness of the night. These sounds delight, amaze or frighten us. We must carry what we choose to eat, and must carefully consider our diet in the light of temperature, topography and time. We must carry, boil or purify our water. After sufficient isolation, with anticipation we smell the smoke of campfires far away, and realize with appreciation what community is really about as we paddle, hike or ride to meet strangers, companions or friends.

These influences permeate the wilderness, and make our experiences truly primal. Dealing with the natural world in a direct and unmediated way allows basic levels of awareness to be activated. Structures of perception and ways of knowing, which lie below the ego and the personality, are activated. We experience an awareness that is fully present to the moment. We remember with our bodies and our very souls the ancient language of survival: stimulus/response! This is how the creatures in the wilderness survive, responding naturally to life and the threat of death.[15]

This, too, is <u>our</u> potential: to experience the world in a primal, immediate and undistorted way. For a moment we take our rightful place along side the creatures of the wild. Our original Selves emerge, long buried beneath the artificial constructs of society and culture. We sense the mystery of the natural world. We are a part of the timeless dance of life, and we are an expression of its mystery. This is the real meaning of recreation and renewal: to be reborn into a renewed perspective about who and what we are. Such moments of realization are extraordinary when they happen, are never forgotten, and are moments upon which lives of integrity and meaning can be built.

SUMMARY

The foregoing model is a theory about how wilderness experiences facilitate personal growth. The four postulates are assumptions or statements we assume to be true, and state that the possibility that personal growth will result from wilderness experience depends on:

1) participants being in a receptive mode;
2) the right degree of stress from program activities and from contact with the environment;
3) a change of pace and reprieve from many cultural influences that allows the chance for attunement to oneself and the natural world;

4) and opportunities for metaphors that increase our awareness of desirable qualities that can be applied back home.

The four hypotheses are tentative principles, inferred from observed evidence and put forth for the sake of arugment. They describe a process, an unfolding awareness in increasing depth, that can occur through many outdoor experiences but ultimately in wilderness. The process includes:

1) increased personal awareness of basic patterns of feelings, behaviors, values and beliefs--a first step toward growth;
2) the opportunity then, to evaluate these patterns, and affirm or change them while at a growing edge;
3) increased social awareness, also to be evaluated for possible affirmation or change;
4) and the primal influences of nature which can result in a sense of humility in relation to the natural world.

We hope and expect that the model will be a focus of debate that will generate additional ideas and inspire future research. In the meantime, it provides a valuable framework to:

1) guide the design of wilderness programs to increase their potential for leading to personal growth;
2) guide the instruction of wilderness program leaders in concepts and processes effective in increasing the growth potential of wilderness experiences for participants:
3) guide wilderness visitors toward more enriching experiences;
4) and increase the understanding of wilderness managers so that they can better protect and foster opportunities for the effective use of wilderness for personal growth and the development of human potential.

APPLYING THE MODEL

These ideas are presented in a scientific framework of postulates and hypotheses. Let us speak more directly about how they might be applied to increase the personal growth potential of wilderness experiences.

First, diagnose and cultivate receptively to personal growth and change. It is unrealistic to think that maximum growth is possible among random participants merely by running them through a wilderness program. Focus on the individuals who are most receptive to the program and those involved in a life transition of one sort or another.

Second, create the right degree of stress from program activities and contact with natural environment. The objective is not to break individuals down but to bring each of them to their growing edge by creating optimum stress for each individual--conditions with which they can cope but requiring some extra effort. Recognize that the tolerance for stress of each individual is different and that proper challenge for one may be too much for another.

It is a balance between hard and soft activities that is needed--hard activities like rock climbing, and soft activities like introspective exercises and group dynamics. In the final analysis what wilderness locations and outdoor activities really do is set the stage for something introspective to occur--to bring about awareness of basic patterns for evaluation and increase motivation for growth and change.

Third, to take full advantage of the new environment and activities in wilderness, participants need guidance in how to attune to themselves, each other, and to the natural world. Time must be allowed for, and activities must be structured to facilitate, personal reflection, social interaction, and communion with nature. This focus on reflection, social activity, and environmental interaction is most effective if done in gradual stages and in increasing depth. Again, a balance of hard and soft activities is required, in a logical sequence, that ideally will result in personal insight, increased awareness, the evaluation of core patterns, and an initiation into the process of change.

Fourth, much of the value in wilderness activities lies in the metaphors they provide. But it is difficult to capture metaphors, to understand and make them explicit. Metaphors need to be discussed, explained, and processed with participants. To deliberately and consciously provoke this kind of creative thinking is a delicate task. Wilderness leaders can greatly enhance the quality of their programs by seeking exposure to, and training in, innovative methods for provoking metaphoric thinking, so that they can help participants gain the very most from their outdoor experiences.

And finally, the model suggests--and we firmly believe--that the primal influences of wilderness allow participants to see themselves in their true perspective to the natural world--a view and realization that is humbling, inspiring and empowering. Wilderness program leaders need to help participants focus on, experience in depth, and share with one another the life enriching effects which result from this primal contact with nature. This is the essence of the wilderness experience, and we all need to develop our capacity to experience and then clearly articulate the value of these encounters to fully realize the potential for personal growth from our wilderness experience.

FOOTNOTES

[1] We wish to acknowledge the help of doctoral student, Jim Tangen-Foster, from the UI, College of Forestry, in preparing this paper.

[2] Pertinent reviews of research results and methods include Ewert n.d; Godfrey 1974; Richards 1977; 1984; Shore 1977.

[3] Analyses of the experimental process include: Taft 1974; Kesselheim 1974; Harmon and Templin 1980; Bacon 1983.

[4] The need for but lack of agreed upon theory is underscored in material by Golins 1983, p. IV.

[5] Harmon and Templin 1980; Bank 1985; and Richards 1984 underscore that supporting evidence comes from narrative, anecdotal and journalistic evidence.

[6] Our concept of personal growth draws heavily on the ideas of Maslow (1968; 1970; 1971) and Rogers (1961; 1971) but focuses on the pragmatic and situational opportunity for individuals to achieve their potential, rather than seeing self-concept and the inner drive toward self-actualization as stable traits.

[7] The "adaptions to stress" identified by Selye (1978) include emotional and behavioral coping mechanisms such as increased motivation for helping methods--such as participation in counselling (or personal growth programs).

[8] Maslow (1968) asserts an optimal stress idea noting that pain, grief and turmoil are sometimes necessary for growth and self-fulfillment, but only to the extent that they reveal and articulate our "inner nature". Research by Malmo (1975) and others indicates an optimal level of arousal for any given task. Zuckerman (1974; 1978) indicates that different people have different arousal levels for the efficient performance of the same task, and there is a tendency for individuals to seek their optimal arousal level.

[9] Seligman (1975) indicates that exposure to excessive stress over which they have no control results first in anxiety, then depression and "helplessness" as they come to believe that none of their future responses will control their environment.

[10] One typology of goal orientation, with implications for prescribing optimum experience, progresses in this way: ego orientation seeking opportunities to compete against others; task orientation seeking opportunities for self testing or to experience excitement and stimulation; social orientation seeking group cohesion and personal affirmation by a group; extrinsic orientation seeking external reward or compensation (Maehr and Braskamp 1986).

[11] Many studies of wilderness users document "escape/stress release" as one of the most common motives for wilderness visitation. References to such research include Hammitt (1982) and Driver (1976). Nash (1982) notes that the most recurrent themes in historical arguments for wilderness are the opportunities for a contrast from, and balance with, civilization through a change of environment, focus and pace.

[12] May (1978) suggests that the stimulation of "hectic din" from modern civilization and technology blocks and buffers creative process and insight which may emerge in natural environments.

13 Brown (1983), co-author of this paper, has developed through his work in the field of Transpersonal Psychology, and on a retreat program called Wilderness Vision Quest he has been conducting since 1975, an elaborate and careful methodology for helping wilderness retreat participants tap, explore, and integrate some of the deep levels of awareness associated with right brain activity.

14 Outward Bound promotional literature states that the program is structured to guide students to success through success experiences at graduated (increasingly challenging) levels, thus providing metaphors that can be generalized to real life challenges--increasing expectations for success (Outward Bound 1985). Stephen Bacon's book, "The Conscious Use of Metaphor in Colorado Outward Bound" is the most complete treatise on how outdoor program metaphors can be effectively used (Bacon 1983). He states that the more isomorphic (similar to real life) a metaphor is, the more potential it has for providing personal growth by changing the metaphoric outcome compared to real life experience.

15 Nash (1982) refers to works by Knorad Lorenz, Desmond Morris, Loren Eiseley and others that support the assumption that the thought and behavior of modern man is imprinted from the millions of years humans evolved in wilderness.

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BIOGRAPHICAL SKETCH

DR. JOHN C. HENDEE

Dr. John C. Hendee worked for the U.S. Forest Service for 25 years before being named Dean of the University of Idaho, College of Forestry, Wildlife & Range Sciences in August, 1985. Early in his career, he worked in timber management, fire research, and led a Forest Service recreation research unit in Seattle, Washington where, for 12 years, he led some of the earliest studies of wilderness and human bvehavior aspects of resource mangement. He was selected as a Federal Congressional Fellow for 1976-77, served on the Forest Service Legislative Affairs Staff and was assistant director of the Southeastern Forest Experiment Station in Asheville, North Carolina, from 1978-1985.

Hendee has authored more than 90 publications on people aspects of natural resources, is senior coauthor of the textbook, Wilderness Management, and coauthor of the book, Wildlife Management in Wilderness. Dr. Hendee has received many awards for his work, including: in 1974, an American Motors' National Conservation Achievement Award for "focusing social research methods on natural resource problems"; in 1985 for "lifelong contributions to wilderness research and philosophy" from the National Outdoor Leadership School; and in 1987, for "lifetime contributions to the administration of natural resources" from the American Society for Public Administration.

Dr. Hendee is Science Vice Chairman for the 4th World Wilderness Congress and a Director of the International Wilderness Leadership Foundation, Inc. An advocate of balanced resource use, he is a strong believer in the use of natural environments for developing human potential and the need for research and education to improve such use.

BIOGRAPHICAL SKETCH

MICHAEL H. BROWN, M.A.

Michael H. Brown, M.A., is a Human Resources Consultant living in Springfield, Virginia, practicing in Washington, D.C., and nationwide. He holds a B.A. in Psychology from the University of Maryland, and an M.A. in Psychology from Sonoma State University in California. Besides his academic achievements, Michael has 10 years of professional training in the field of Transpersonal Psychology, with a special emphasis in a discipline called Psychosynthesis.

Michael conducts individual, family, couples, and group therapy, along with personal growth and professional training programs internationally. He is the author of 15 articles, and has appeared on more than 100 radio and television programs, about the use of innovative methods for developing human resources. His seminars for professional development include team building, managerial and supervisory training, improving communication skills, assertiveness training, career development, and stress management.

Michael has taught courses at American University, the University of New York at New Paltz, Piedmont Virginia Community College, and other institutions of higher education. Among his clients have been: USDA-Forest Service; USDI-Bureau of Land Managment; NASA; the Government of the District of Columbia; the Department of Navy; Office of Personnel Management; the University of Idaho.

Michael has been conducting the Wilderness Vision Quest since 1976, and is an advisor to the board of directors of the International Wilderness Leadership Foundation, Inc., sponsors of the World Wilderness Congresses.